

**REMARKS**

Favorable reconsideration and allowance of the subject application are respectfully requested in view of the following remarks.

**Summary of the Office Action**

The disclosure stands objected to because of informalities.

Claims 3 and 7 stand rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 stands rejected under 35 U.S.C. §102(e) as being anticipated by *Madhukar et al.* (U.S. Patent No. 6,344,403).

Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Madhukar et al.* in view of *Sugiyama et al.* (U.S. Patent No. 6,060,743).

Claim 3 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Madhukar et al.* in view of *Winningham et al.* (U.S. Patent No. 6,518,194).

Claim 4 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Madhukar et al.* in view of *Ueda et al.* (U.S. Patent No. 6,326,311).

Claims 5, 6 and 8 are allowed.

Claim 7 would be allowable if rewritten to overcome the rejection under 35 U.S.C. §112.

**Summary of the Response to the Office Action**

A Submission of Replacement Drawings and a verified translation of Korean Patent Application No. 2000-68406 are submitted herewith. Applicant has amended the specification, and claims 1, 3, and 7 by this amendment. Accordingly, claims 1-8 are pending.

**Objection to the Specification**

The disclosure stands objected to because of informalities. In particular, the Office Action asserts that the description at page 12, lines 8-12 is unclear. To address the Examiner's concerns, Applicant has amended the paragraph beginning at page 12, line 8 in light of the discussion, for example, at page 14, lines 7-9 of the specification. Accordingly, Applicant respectfully requests that the objection to the specification be withdrawn.

**The Disposition of the Claims**

Applicant notes with appreciation the Examiner's allowance of claims 5, 6 and 8, and the Examiner's indication that claim 7 would be allowable, as noted at paragraphs 10 and 11 of the Office Action. While Applicant agrees that these claims are allowable and patentably distinguish over the prior art, Applicant respectfully does not acquiesce that patentability resides only in the features expressed at paragraph 12 of the Office Action, nor that each and every feature recited in the claims is required for patentability.

In addition, claims 1-4 are also believed to be allowable for the following reasons.

**Claim Rejections Under 35 U.S.C. §112, First Paragraph**

Claims 3 and 7 stand rejected under 35 U.S.C. §112, first paragraph. In particular, the Office Action asserts that the feature of "wherein the second insulating film and the nano-crystalline silicons are etched by etching the nano-crystalline silicon by about 10 nm," as set forth in claims 3 and 7 is unclear. Applicant has amended claims 3 and 7 to address the Examiner's concerns.

As described, for example, at page 10, line 14 – page 11, line 6 of the specification, the first oxide film 34 and the nano-crystalline silicons 22 are etched to a same height. Also, see FIGs. 2B-2C. Thus, the subject matter of claims 3 and 7 is fully supported by the specification

for enabling one skilled in the art to which it pertains or with which it is most nearly connected, or to make and/or use the invention. Accordingly, Applicant respectfully submits that claims 3 and 7 satisfy the requirements as set forth in 35 U.S.C. §112, first paragraph, and respectfully request that the rejection of claims 3 and 7 under 35 U.S.C. § 112, first paragraph, be withdrawn.

**Claim Rejection Under 35 U.S.C. §102(e)**

Claim 1 stands rejected under 35 U.S.C. §102(e) as being anticipated by *Madhukar et al.* To the extent that this rejection might be applied to claim 1 as newly-amended, it is respectfully traversed for at least the following reasons.

Applicant respectfully submits that *Madhukar et al.* does not anticipate claim 1, as newly-amended, because *Madhukar et al.* does not disclose all of the features of claim 1. For instance, it is respectfully submitted that *Madhukar et al.* fails to teach or suggest the claimed combination as set forth in independent claim 1 including at least “partially etching the second insulating film and the nano-crystalline silicons,” and “oxidizing surfaces of the etched nano-crystalline silicons.”

In contrast to the claimed invention as a whole, *Madhukar et al.* discloses that “[f]ollowing the reacting of the portion of the nanoclusters [21], the reacted portion may be removed along with a corresponding portion of the tunnel and control dielectric layers 14 and 26 using an etching operation.” Column 13, lines 53-56 of *Madhukar et al.* Thus, *Madhukar et al.*’s nanoclusters (21) first undergo a reacting operation and then undergo etching operations. See FIGs. 14 and 15 of *Madhukar et al.* Accordingly, Applicant respectfully submits that *Madhukar et al.* fails to teach or suggests partially etching the nano-crystalline silicons and oxidizing surfaces of the etched nano-crystalline silicons, as set forth in independent claim 1, as newly-amended.

M.P.E.P. § 2131 states “[t]o anticipate a claim, the reference must teach every element of the claim.” Applicant respectfully submits that since *Madhukar et al.* does not teach or suggest all of the features of claim 1, *Madhukar et al.* does not anticipate claim 1. Accordingly, withdrawal of the rejection of claim 1 under 35 U.S.C. §102(e) is respectfully requested.

**Claim Rejections Under 35 U.S.C. §103(a)**

Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Madhukar et al.* in view of *Sugiyama et al.* Claim 4 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Madhukar et al.* in view of *Ueda et al.* (U.S. Patent No. 6,326,311). These rejections are respectfully traversed for at least the following reasons.

As discussed above, *Madhukar et al.* fails to teach or suggest the claimed combination as set forth in independent claim 1 including at least “partially etching the second insulating film and the nano-crystalline silicons; and oxidizing surfaces of the etched nano-crystalline silicons.” Applicant further respectfully submits that *Sugiyama et al.* and *Ueda et al.* fail to remedy the deficiencies of *Madhukar et al.* in the this regard. Accordingly, it is respectfully submit that *Madhukar et al.* in view of *Sugiyama et al.*, and *Madhukar et al.* in view of *Ueda et al.* also fail to teach or suggest the claimed combination as set forth in independent claim 1 including at least “partially etching the second insulating film and the nano-crystalline silicons; and oxidizing surfaces of the etched nano-crystalline silicons.”

Since *Madhukar et al.* in view of *Sugiyama et al.* fails to render claim 1 unpatentable, and claim 2 depends from claim 1, it is respectfully submitted that *Madhukar et al.* in view of *Sugiyama et al.* also do not render claim 2 unpatentable. Similarly, since *Madhukar et al.* in view of *Ueda et al.* fails to render claim 1 unpatentable, and claim 4 depends from claim 1, it is respectfully submitted that *Madhukar et al.* in view of *Ueda et al.* also do not render claim 4

unpatentable. Accordingly, withdrawal of the rejections of claims 2 and 4 under 35 U.S.C. §103(a) is respectfully requested.

Claim 3 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Madhukar et al.* in view of *Winningham et al.*

Applicant respectfully submits that *Winningham et al.* should not be considered as prior art in the present application under any subsection of 35 U.S.C. §102. On November 15, 2001, Applicant claimed priority of a foreign application and filed a Certified copy of Korean Patent Application No. 2000-68406 which was filed in Korea on November 17, 2000. Pursuant to 37 C.F.R. §1.55(a), Applicant submits concurrently herewith a verified translation of Korean Patent Application No. 2000-68406. The U.S. filing date of *Winningham et al.* is December 28, 2000, which is after the priority date to which the present application is entitled. The publication date of any foreign counterpart applications of *Winningham et al.* would also presumably be after the priority date to which the present application is entitled. Accordingly, Applicant respectfully submits that *Winningham et al.* should not be considered as prior art in the present application under any subsection of 35 U.S.C. §102. Hence, it is respectfully submitted that withdrawal of rejection of claim 3 under 35 U.S.C. §103(a) is respectfully requested.

### **Conclusion**

In view of the foregoing, withdrawal of the rejections and allowance of the pending claims are earnestly solicited. Should there remain any questions or comments regarding this response or the application in general, the Examiner is urged to contact the undersigned at the number listed below.

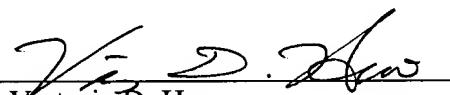
If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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Dated: August 1, 2003

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